

REMARKS

Claims 1-23 are currently pending in the application. By this amendment, claims 22 and 23 are amended for the Examiner's consideration. The above amendments do not add new matter to the application and are fully supported by the specification. For example, support for the amendments is provided at least in paragraphs [0058] and [0077] through [0087] of the specification. Reconsideration of the rejected claims in view of the above amendments and the following remarks is respectfully requested.

Allowed Claims

Applicants appreciate the indication that claims 7-10, 12-17, and 20-21 contain allowable subject matter. Applicants note, however, that the Examiner's statement that the claims would be allowable if "rewritten to overcome the rejections under 35 U.S.C. 101, 2nd paragraph" is ambiguous. Applicants will assume that the phrase "2nd paragraph" should be omitted. In any event, Applicants submit that all of the claims are in condition for allowance for the following reasons.

Objection to Specification

The specification has been objected to for failing to provide the serial number of a concurrently filed patent application. The specification has been amended by adding the appropriate serial number and patent number. Accordingly, the objection to the specification should be withdrawn.

35 U.S.C. §101 Rejection

Claims 1-23 were rejected under 35 U.S.C. §101. This rejection is respectfully traversed.

The Examiner asserted that the basis of determining statutory subject matter is a "two prong test" of whether the invention is "within the technological arts" and whether the invention "produces a useful, concrete, and tangible result". The Examiner asserted that claims 1-17 are nonstatutory for failing to pass the technological arts test. The Examiner asserted that claims 18-21 are nonstatutory for failing to recite a useful,

tangible and concrete result. The Examiner did not provide a reasoned statement of why claims 22-23 were rejected under 35 U.S.C. §101, even though the Examiner stated that claims 1-23 were rejected on page 2 of the Detailed Action. Applicants respectfully disagree with the rejections for the reasons described below.

Claims 1-17

Applicants submit that "technological arts" test applied by the Examiner is an incorrect standard for determining statutory subject matter. Attention is directed to the "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (hereafter referred to as "Guidelines") of the OFFICIAL GAZETTE of the UNITED STATES PATENT AND TRADEMARK OFFICE, dated November 22, 2005 (Volume 1300, Number 4). The "ANNEX III" section of the Guidelines describes improper tests for subject matter eligibility, and lists the "not in the technological arts test" as the first improper test. The Guidelines state that:

United States patent law does not support the application of a "technical aspect" or "technological arts" requirement. Title 35 of the United States Code does not recite, explicitly or implicitly, that inventions must be within the "technological arts" to be patentable.

The Guidelines further state that:

The following tests are not to be applied by examiners in determining whether the claimed invention is patent eligible subject matter: (A) "not in the technological arts" test...

The Guidelines further state that:

USPTO personnel should no longer rely on the technological arts test to determine whether a claimed invention is directed to statutory subject matter.

Thus it is clear that the Examiner has applied an improper standard in determining whether Applicants' claimed invention is directed to statutory subject matter. Therefore, the 35 U.S.C. §101 rejection of claims 1-17 is improper and should be withdrawn.

Claims 18-21

The Examiner stated that claim 18 is nonstatutory for failing "to recite a useful, concrete and tangible result" because "the body of the claim does not recite of any optimizing step" (sic). The Examiner suggested that the claims be amended to recite an optimizing step.

Contrary to the Examiner's assertion, a claim is statutory if it falls within one of the enumerated categories of 35 U.S.C. §101 and satisfies the utility requirement. Claim 18 recites, in pertinent part, "A system of optimizing a supply schedule, comprising: means for dividing...; means for sorting ... ; and means for allocating...". Thus, claim 18 is a product claim that recites specific parts as permitted by 35 U.S.C. §112, 6th Paragraph. As such, the claimed invention falls within the "machine" category of 35 U.S.C. §101. Furthermore, the claimed invention is useful in that it has specific, substantial, and credible utility. Specifically, the claimed invention relates to a system that can be used for rationing manufacturing resources among competing demands within a multi-stage semiconductor manufacturing system (see paragraphs [0003] through [0005] of the Specification).

The Examiner appears to be of the opinion that the *claims must recite* a useful, concrete, and tangible result. Applicants respectfully submit, however, that the requirement is that the *claimed invention must produce* a useful, concrete, and tangible result. In any event, Applicants submit that the rejected claims do produce a useful, concrete, and tangible result. Claim 18 recites:

...allocating the resources and component supplies to satisfy a scheduled release associated with the "N" separate and smaller sized schedule releases such that the assembly capacities and component supplies are rationed to maximize an output of product in accordance with the priority ranked scheduled release.

Maximized output of product is clearly is a useful, concrete, and tangible result. Lastly, merely because the preamble recites "optimizing" does not mean that the body

has to recite an optimizing step. An intended use or functional limitation in a preamble does not render a claim non-statutory.

Accordingly claims 18-21 are drawn to a useful machine, which produces a useful, concrete, and tangible result. Therefore, the claims are drawn to statutory subject matter and the rejection is improper.

Claims 22-23

As noted above, the Examiner stated that claims 1-23 were rejected under 35 U.S.C. §101, but did not provide any reasoned statement as to why claims 22-23 were rejected. As such, the rejection of claims 22-23 is improper and should be withdrawn.

Accordingly, Applicants respectfully request that the rejection over claims 1-23 be withdrawn.

35 U.S.C. §103 Rejection

Claims 1-3, 11, 18-19, 22 and 23 were rejected under 35 U.S.C. §103(a) for being unpatentable over U. S. Patent No. 5,548,518 issued to Dietrich *et al.* ("Dietrich") in view of U. S. Patent No. 4,015,366 issued to Hall, III ("Hall"). Claims 4-6 were rejected under Dietrich in view of Hall and further in view of U. S. Patent No. 6,606,527 issued to de Andrade, Jr. *et al.* ("de Andrade"). These rejections are respectfully traversed.

Claims 1-3, 11, 18-19, 22, and 23

The Examiner rejected claims 1-3, 11, 18-19, 22, and 23 under 35 U.S.C. §103(a) as being unpatentable over Dietrich in view of Hall. The Examiner is of the opinion that it would have been obvious to the skilled artisan to combine Dietrich and Hall, and that the resulting combination shows all of the features of the claimed invention. Applicants respectfully disagree and submit that the Examiner has failed to establish a *prima facie* case of obviousness.

The Examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the

references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP §2142.

The present invention generally relates to computer implementable decision support systems for determining a production schedule of feasible material releases within a complex multi-stage manufacturing system architecture. In more particularity, the present invention relates to a system for rationing manufacturing resources among competing demands according to a defined set of business rules. Claim 1 recites :

A method for providing a supply schedule, comprising the steps of:

dividing a priority ranked release schedule into "N" separate release schedules, where "N" represents a number of divisions of the priority ranked release schedule;

sorting the "N" separate release schedules in a priority order based on an original priority ordering of the priority ranked release schedule; and

allocating available component supply based on the priority in the "N" separate release schedules,

wherein the allocating step provides a supply schedule of material releases of product by rationing of the available component supply in each of the "N" separate release schedules.

The Examiner asserts that Dietrich shows all of the features of claim 1 in lines 39-49 of column 4, but admits that Dietrich "fails to expressly disclose rationing of the available component supply in each of the "N" separate release schedules". Applicants agree that Dietrich does not teach or suggest this feature. Applicants submit, however, that Dietrich does not contain the features of claim 1 as suggested by the Examiner, and that Hall does not compensate for the deficiencies of Dietrich.

Dietrich is related to a method for generating a feasible production schedule. Dietrich specifically discloses in lines 39-49 of column 4:

If there is sufficient material and capacity available to meet all the requirements through "just-in-time" production, then the external availability schedule will exactly correspond

to the requirements. If there is not sufficient capacity or material available to meet all requirements, then the solution will allocate the available resources in favor of P/Ns with higher priority. The basic allocation algorithm considers P/N, period pairs (j,t) in order of priority $h_{j,t}$. It allocates available resources and materials to each of the requirements $v_{j,t}$ until either the entire requirements quantity is satisfied or the availability of some material or resource is exhausted.

Contrary to the Examiner's assertion, this passage from Dietrich merely describes allocating resources to part numbers according to priority. Nothing in the passage teaches or suggests "dividing a priority ranked release schedule into "N" separate release schedules" as recited in claim 1. Dietrich simply makes no mention of dividing a priority ranked release schedule into "N" separate release schedules. Furthermore, Dietrich does not teach or suggest "sorting the "N" separate release schedules in a priority order based on an original priority ordering of the priority ranked release schedule; and allocating available component supply based on the priority in the "N" separate release schedules" as recited in claim 1.

Hall does not compensate for the deficiencies of Dietrich. Hall discloses a system for automatically irrigating an entire farm (col. 48, lines 42-68). Hall does not describe release schedules or component supply. To the contrary, Hall merely describes rationing the supply of water based upon a priority of crop value. Hall certainly makes no mention of "allocating available component supply ... by rationing of the available component supply in each of the "N" separate release schedules" as recited in claim 1. Thus it can be seen that Dietrich and Hall, alone or in combination, do not teach or suggest every element of the claimed invention. Therefore, the Examiner has failed to establish a *prima facie* case of obviousness.

Furthermore, the combination of Dietrich and Hall is improper because Hall is non-analogous art. Dietrich discloses a method of generating a production schedule relating to the manufacture of end products (col. 1-3). Hall, on the other hand, discloses an agricultural system that includes, *inter alia*, a computer program for automatically irrigating an entire farm (abstract and lines 43-69 of col. 48). The skilled artisan concerned with manufacturing products from subassemblies would not reasonably look to a farm irrigation system for guidance. Thus, Hall is non-analogous art and there is no

motivation to combine Dietrich and Hall. Therefore, the Examiner has failed to establish a *prima facie* case of obviousness.

Regarding independent claims 11, 18, and 22, Applicants submit that the Examiner has failed to establish a *prima facie* case of obviousness. The claims all recite, *inter alia*,

...dividing each of a priority ranked scheduled release into "N" separate and smaller sized schedule releases, where the priority of each of the "N" schedule releases is equal to a priority of an original release of the priority ranked scheduled release...

...sorting the "N" separate and smaller sized schedule releases based on the original priority ordering and an additional level of priority ordering such that subsequent resource allocation is consistent with rationing of resources; and...

As described above, Dietrich and Hall do not teach or suggest dividing a priority ranked scheduled release into "N" separate and smaller sized schedule releases. Furthermore, the Examiner does not even address, and the applied references do not show, the claimed feature of an additional level of priority ordering.

Regarding independent claim 23, Applicants submit that the Examiner has failed to establish a *prima facie* case of obviousness. Claim 23 is similar to claim 1 except that claim 23 recites a machine readable medium containing code for providing a supply schedule. As described above, Dietrich and Hall do not teach or suggest dividing a priority ranked scheduled release into "N" separate and smaller sized schedule releases. Furthermore, the Examiner does not even address the claimed feature of a machine readable medium containing code for providing a supply schedule.

As to dependent claims 2, 3, and 19, Applicants submit that the Examiner has not addressed the additional elements of these claims and therefore has failed to establish a *prima facie* case of obviousness. In any event, Applicants submit that these claims are dependent on an allowable independent claim.

Accordingly, Applicants respectfully request that the rejection over claims 1-3, 11, 18-19, 22, and 23 be withdrawn.

Claims 4-6

The Examiner rejected claims 4-6 under 35 U.S.C. §103(a) as being unpatentable over Dietrich in view of Hall and further in view of de Andrade. Applicants respectfully disagree.

Applicants submit that de Andrade does not qualify as prior art. The instant application has a filing date of June 26, 2001, which pre-dates de Andrade's filing date of January 21, 2003. Thus, de Andrade is not prior art and the rejection is improper.

Accordingly, Applicants respectfully request that the rejection over claims 4-6 be withdrawn.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant submits that all of the claims are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue. The Examiner is invited to contact the undersigned at the telephone number listed below, if needed. Applicant hereby makes a written conditional petition for extension of time, if required. Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 09-0456.

Respectfully submitted,
Sanjay HEGDE

A handwritten signature in black ink, appearing to read 'Andrew M. Calderon', written over a horizontal dashed line.

Andrew M. Calderon
Reg. No. 38,093

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GREENBLUM & BERNSTEIN, P.L.C.
1950 Roland Clarke Place
Reston, VA 20191
(703) 716-1191